AMENDMENTS TO THE CLAIMS

1.(currently amended) A diesel exhaust gas treatment system comprising:

an oxidation catalyst positioned in an exhaust gas passage of a diesel engine for converting at least a portion of NO contained in said exhaust gas to NO_2 at a temperature between about 175°C to 250°C, said oxidation catalyst comprising platinum and a support material comprising zirconia-silica, said support material having strong acid [[cites]] sites; and

a particulate filter for receiving said exhaust gas.

2. (original) The system of claim 1 wherein said oxidation catalyst is positioned between said exhaust passage and said particulate filter.

3. (original) The system of claim 1 wherein said oxidation catalyst is combined with said particulate filter.

4. (original) The system according to claim 1 further including a second catalyst positioned downstream from said particulate filter.

5. (original) The system according to claim 4 wherein said second catalyst comprises a selective reduction catalyst.

6. (original) The system according to claim 1 further including a NOx trap positioned downstream from said oxidation catalyst.

7. (original) The system of claim 1 wherein said oxidation catalyst comprises from about 1 to 5 wt.% platinum on a support containing from about 3 to 20 wt.% zirconia, and the balance silica.

8. (currently amended) The system of claim 1 wherein said ~~oxidation catalyst~~ support includes one or more oxides selected from the group consisting of TiO_2, P_2O_5, WO_3, B_2O_3, and Al_2O_3.

9. (currently amended) The system of claim 1 wherein said ~~oxidation catalyst~~ support has been prepared with the addition of a heteropolyacid selected from $H_3PW_{12}O_{40}$ and $H_4SiW_{12}O_{40}$.

10.(previously presented) A method for treating diesel exhaust gases comprising:

positioning an oxidation catalyst in an exhaust gas passage of a diesel engine, said oxidation catalyst comprising platinum and a support material comprising zirconia-stabilized silica, said support material having strong acid sites;

providing a particulate filter downstream of said oxidation catalyst;

exposing said oxidation catalyst to diesel exhaust gas containing NO such that at least a portion of said NO contained in said exhaust gas is converted to NO_2 at a temperature between about 175°C to 250°C; and

passing said NO_2 through said particulate filter in an amount sufficient to oxidize particulate matter trapped on said filter.

11. (original) The method of claim 10 wherein said oxidation catalyst comprises from about 1 to 5 wt.% platinum on a support containing from about 3 to 20 wt.% zirconia and the balance silica.

12. (original) The method of claim 10 including pretreating said oxidation catalyst in a gas mixture containing NO, O_2 and N_2 prior to positioning said catalyst in said exhaust stream.

13. (original) The method of claim 12 wherein said gas mixture comprises about 500 ppm of NO, about 3% by volume O_2, and the balance N_2.

14. (original) The method of claim 12 wherein said pretreatment is carried out a temperature of between about 500 to 650°C.

15. (currently amended) The method of claim 10 including adding one or more oxides to said ~~oxidation catalyst~~ support prior to positioning said oxidation catalyst in said exhaust stream, said one or more oxides being selected from the group consisting of TiO_2, P_2O_5, WO_3, B_2O_3, and Al_2O_3.

16. (currently amended) The method of claim 10 including adding a heteropolyacid selected from $H_3PW_{12}O_{40}$ and $H_4SiW_{12}O_{40}$ to said ~~oxidation catalyst~~ support prior to positioning said oxidation catalyst in said exhaust stream.

17. (original) The method of claim 10 wherein about 60% to about 96% of NO contained in said exhaust gas is converted to NO_2.

18. (original) The method of claim 10 further including providing a second catalyst downstream of said particulate filter and passing said exhaust gas over said second catalyst.

19. (original) The method of claim 18 wherein said second catalyst is a selective reduction catalyst.

20. (original) The method of claim 10 further including a NOx trap positioned downstream of said oxidation catalyst.

21.(cancelled)

22. (original) The method of claim 10 wherein said conversion of NO to NO_2 occurs at a temperature of between about 200 to 250°C.

23. (original) The method of claim 10 wherein said oxidation of particulate occurs at a temperature less than about 250°C.

24. (currently amended) A method for treating diesel exhaust gases comprising:

positioning an oxidation catalyst in an exhaust gas passage of a diesel engine, said oxidation catalyst comprising platinum and a support material comprising zirconia-stabilized silica, said support material having strong acid [[cites]] sites;

providing a particulate filter in combination with said oxidation catalyst;

exposing said oxidation catalyst to diesel exhaust gas containing NO such that at least a portion of said NO contained in said exhaust gas is converted to NO_2 at a temperature between about 175°C to 250°C; and

passing said NO_2 through said particulate filter in an amount sufficient to oxidize particulate matter trapped on said filter.

25. (previously presented) A diesel exhaust gas treatment system comprising:

a particulate filter for receiving diesel exhaust gas from a diesel engine;

an oxidation catalyst for converting at least a portion of NO contained in said diesel exhaust gas to NO_2 at a temperature between about 175°C to 250°C, said oxidation catalyst comprising platinum and a support material comprising zirconia-silica, said support material having strong acid [[cites]] sites; wherein said oxidation catalyst is impregnated in said particulate filter.

26. (currently amended) A diesel exhaust gas treatment system comprising:

a first oxidation catalyst for converting at least a portion of NO contained in said diesel exhaust gas to NO_2 at a temperature of between about 175°C to 250°C, said oxidation catalyst comprising platinum and a support material comprising zirconia-silica, said support material having strong acid [[cites]] sites; and

a second oxidation catalyst different from said first oxidation catalyst; wherein said first and second oxidation catalyst are positioned in combination in the exhaust gas passage of a diesel engine.

27. (previously presented) A diesel exhaust gas treatment system comprising:

an oxidation catalyst for converting at least a portion of NO contained in said exhaust gas to NO_2, said oxidation catalyst comprising platinum and a support material comprising zirconia-silica; said catalyst having a pKA of between about 5 to 13.

28. (previously presented) A method for treating diesel exhaust gases comprising:

positioning an oxidation catalyst in an exhaust gas passage of a diesel engine, said oxidation catalyst comprising platinum and a support material comprising zirconia-stabilized silica;

providing a particulate filter downstream of said oxidation catalyst;

exposing said oxidation catalyst to diesel exhaust gas containing NO such that about 60% to about 90% of NO contained in said exhaust gas is converted to NO_2; and

passing said NO_2 through said particulate filter in an amount sufficient to oxidize particulate matter trapped on said filter.

29.(previously presented) The diesel exhaust gas treatment system of claim 1 wherein said zirconia-silica support has been formed by impregnating silica gel with a zirconium citrate ammonium complex, drying said support, and calcinating said support at 800°C.